

Amendments to and Listing of the Claims:

1. to 43. [Cancelled]

44. (Currently amended) A ~~synthetic~~ neuronal tissue derived from a brain or spinal cord tissue of a mammal, the ~~synthetic neuronal~~ tissue ~~comprising~~ consisting essentially of:

partially-differentiated neuronal progenitor cells that maintain their capacity to perform mitosis and are capable of differentiating into substantially only dopaminergic neurons upon contact of the ~~synthetic neuronal~~ tissue with a differentiation-promoting factor selected from the group consisting of glial cell line-derived neurotrophic factor, leukemia inhibitory factor, interleukin-1, interleukin-2, interleukin-3, interleukin-4, interleukin-5, interleukin-6, interleukin-7, interleukin-8, interleukin-9, interleukin-10, interleukin-11, interleukin-12, interleukin-13, interleukin-14, interleukin-15, interleukin-16, and thyroid hormone,

wherein the ~~synthetic neuronal~~ tissue does not comprise cells that give rise to sufficient glial cells to provoke an immune response upon implantation of the ~~synthetic neuronal~~ tissue into a recipient.

45. (Currently amended) The ~~synthetic neuronal~~ tissue of claim 44, wherein more than 90% of cells in the ~~synthetic neuronal~~ tissue are the progenitor cells.

46. (Currently amended) The ~~synthetic neuronal~~ tissue of claim 45, wherein more than 95% of cells in the ~~synthetic neuronal~~ tissue are the progenitor cells.

47. (Currently amended) The ~~synthetic neuronal~~ tissue of claim 44, wherein the mammal is a human.

48. (Currently amended) The ~~synthetic neuronal~~ tissue of claim 47, wherein the human is an adult.

49. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 47, wherein the human is an embryo.

50. [Cancelled]

51. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 47, wherein the progenitor cells are obtained from either the subventricular region or the hippocampal region of the brain.

52. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 44, wherein the ~~synthetic~~ neuronal tissue is derived from a single cell.

53. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 44, wherein the ~~synthetic~~ neuronal tissue is made by contacting neuronal progenitor cells obtained from the brain or spinal cord tissue with a the differentiation-promoting factor in order to render them partially-differentiated.

54. to 62. [Cancelled]

63. (Currently amended) A ~~synthetic~~ neuronal tissue derived from a brain or spinal cord tissue of a mammal, wherein the ~~synthetic~~ neuronal tissue ~~comprises~~ consists essentially of partially-differentiated neuronal progenitor cells that maintain their capability to perform mitosis and are capable of differentiating into substantially only dopaminergic neurons upon contact of the ~~synthetic~~ neuronal tissue with a differentiation-promoting factor selected from the group consisting of glial cell line-derived neurotrophic factor, leukemia inhibitory factor, interleukin-1,

interleukin-2, interleukin-3, interleukin-4, interleukin-5, interleukin-6, interleukin-7, interleukin-8, interleukin-9, interleukin-10, interleukin-11, interleukin-12, interleukin-13, interleukin-14, interleukin-15, interleukin-16, and thyroid hormone,

wherein the ~~synthetic~~ neuronal tissue does not comprise sufficient cells that give rise to glial cells to provoke an immune response upon implantation of the ~~synthetic~~ neuronal tissue into a recipient, and

wherein the ~~synthetic~~ neuronal tissue is obtained by a method comprising:

- a) dissecting the brain or spinal cord tissue;
- b) isolating neuronal progenitor cells from the brain or spinal cord tissue;
- c) proliferating the progenitor cells;
- d) partially differentiating the progenitor cells by transiently exposing the progenitor cells to a the differentiation-promoting factor;
- e) sub-cloning one of the partially-differentiated neuronal cells; and
- f) proliferating the sub-cloned partially-differentiated neuronal progenitor cell, whereby a population of expanded, partially-differentiated neuronal progenitor cells that maintain their capability to perform mitosis is synthesized, the population being the ~~synthetic~~ neuronal tissue.

64. to 69. **[Cancelled]**

70. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 63, wherein more than 90% of cells in the ~~synthetic~~ neuronal tissue are the partially-differentiated neuronal progenitor cells.

71. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 63, wherein the partial differentiation is performed more than once.

72. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 63, wherein at least one of the proliferation, partial differentiation, and sub-cloning steps is conducted at a sub-atmospheric oxygen level.

73. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 72, wherein the oxygen level is less than 10%.

74. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 72, wherein step c) is conducted at a sub-atmospheric oxygen level.

75. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 63, wherein at least one of the proliferation, partial differentiation, and sub-cloning steps is conducted at a condition which simulates reduced atmospheric oxygen content.

76. (Currently amended) The ~~synthetic~~ neuronal tissue according to claim 75, wherein the condition is achieved using an inhibitor of mitochondrial respiration.

77. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 75, wherein step c) is conducted at a condition which simulates reduced atmospheric oxygen content.

78. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 63, in a serum-free medium.

79. (Currently amended) A ~~synthetic~~ neuronal tissue that does not comprise cells that give rise to sufficient glial cells to provoke an immune response upon implantation of the ~~synthetic~~ neuronal tissue into a recipient, the ~~synthetic~~ neuronal tissue made by transiently contacting in vitro i) neuronal progenitor cells obtained from a brain or spinal cord tissue of a mammal and ii) a differentiation-promoting factor for a period of time that is a) sufficient to render the progenitor cells capable of differentiating into substantially dopaminergic neurons upon contact of the synthetic tissue with a differentiation-promoting factor, and b) not sufficient to eliminate capability of the progenitor cells to perform mitosis.

80. to 82. [Cancelled]

83. (Currently amended) The synthetic tissue of claim 79, wherein substantially all are of the neuronal progenitor cells in the ~~synthetic~~ neuronal tissue are capable of differentiating into only dopaminergic neurons upon contact of the ~~synthetic~~ neuronal tissue with a differentiation-promoting factor, wherein the ~~synthetic~~ neuronal tissue is made by selecting and proliferating a single neuronal progenitor cell after contacting the progenitor cells and the differentiation-promoting factor, wherein the single progenitor cell is selected on the basis that it expresses a marker characteristic of the dopaminergic neuron.

84. (Currently amended) The ~~synthetic~~ neuronal tissue of claim 83, wherein the single neuronal progenitor cell is proliferated by contacting the cell with a mitogen after selecting the cell.